

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY )  
THE OIL CONSERVATION DIVISION FOR THE )  
PURPOSE OF CONSIDERING: )

CASE NO. 12,073

APPLICATION OF NEARBURG EXPLORATION )  
COMPANY, L.L.C., FOR COMPULSORY POOLING )  
AND AN UNORTHODOX SURFACE LOCATION AND )  
SUBSURFACE DRILLING WINDOW, EDDY COUNTY, )  
NEW MEXICO )

**ORIGINAL**

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

November 5th, 1998

Santa Fe, New Mexico

98 NOV 19 PM 2:42

OIL CONSERVATION DIV.

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, November 5th, 1998, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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## I N D E X

November 5th, 1998  
Examiner Hearing  
CASE NO. 12,073

	PAGE
EXHIBITS	3
APPEARANCES	4
APPLICANT'S WITNESSES:	
<u>DUKE W. ROUSH</u> (Landman)	
Direct Examination by Mr. Kellahin	6
Examination by Examiner Catanach	16
<u>JERRY B. ELGER</u> (Geologist)	
Direct Examination by Mr. Kellahin	22
Examination by Examiner Catanach	31
<u>CLYDE FINDLAY</u> (Engineer)	
Direct Examination by Mr. Kellahin	34
Examination by Examiner Catanach	38
REPORTER'S CERTIFICATE	42

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## E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	6	16
Exhibit 2	7	16
Exhibit 3	9	16
Exhibit 4	11	16
Exhibit 5	12	16
Exhibit 6	13	16
Exhibit 7	15	16
Exhibit 8	23	31
Exhibit 9	27	31
Exhibit 10	35	38
Exhibit 11	41	41

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## A P P E A R A N C E S

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By: W. THOMAS KELLAHIN

## FOR YATES PETROLEUM CORPORATION:

CAMPBELL, CARR, BERGE and SHERIDAN, P.A.  
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P.O. Box 2208  
Santa Fe, New Mexico 87504-2208  
By: WILLIAM F. CARR

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2   8:39 a.m.:

3           EXAMINER CATANACH: At this time we'll call Case  
4   12,073.

5           MR. CARROLL: Application of Nearburg Exploration  
6   Company, L.L.C., for compulsory pooling and an unorthodox  
7   surface location and subsurface drilling window, Eddy  
8   County, New Mexico.

9           EXAMINER CATANACH: Call for appearances in this  
10   case.

11          MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of  
12   the Santa Fe law firm of Kellahin and Kellahin, appearing  
13   on behalf of the Applicant.

14          I have three witnesses, two of whom have already  
15   been sworn, and I would like them to continue to be sworn  
16   and qualified in this case.

17          EXAMINER CATANACH: Okay, call for additional  
18   appearances.

19          MR. CARR: May it please the Examiner, my name is  
20   William F. Carr with the Santa Fe law firm Campbell, Carr,  
21   Berge and Sheridan. We represent Yates Petroleum  
22   Corporation in this matter. I do not have a witness.

23          EXAMINER CATANACH: Okay. Can I get the single  
24   last witness to be sworn in at this time, stand up?

25          (Thereupon, the witness was sworn.)

1 EXAMINER CATANACH: Let the record reflect that  
2 this witness has already been sworn and qualified.

3 DUKE W. ROUSH,  
4 the witness herein, after having been first duly sworn upon  
5 his oath, was examined and testified as follows:

6 DIRECT EXAMINATION

7 BY MR. KELLAHIN:

8 Q. Mr. Roush, for the record would you please state  
9 your name and occupation?

10 A. Yes, Duke Roush, R-o-u-s-h, senior landman for  
11 Nearburg Exploration Company.

12 Q. Mr. Roush, was it your responsibility as a  
13 petroleum landman for Nearburg to determine the ownership  
14 within the proposed spacing unit?

15 A. Yes, it was.

16 Q. In addition, were you also responsible for  
17 determining the identity of the offset interest owners  
18 towards whom this well encroached?

19 A. That's correct.

20 Q. And have you been involved in consolidating the  
21 interest owners on a voluntary basis for this project?

22 A. Yes, I have.

23 Q. Give us a short summary by looking at Exhibit 1  
24 of approximately where we are with this spacing unit in  
25 relation to the Artesia airport.

1           A.    The bottomhole location, which is the upper red  
2 dot, is right at the southeastern edge of the airport. The  
3 bottomhole location is essentially the same location we  
4 used to drill the Eagle Creek "14" Number 1.

5           It's -- This section, the east half of 11, is an  
6 extremely chopped-up section, comprised of in excess of  
7 about 36 tracts, some ranging as small as .32 acres.

8           Q.    Let's set aside this plat and continue to have it  
9 available, but let me direct your attention to the  
10 specifics, then, of the project as shown on Exhibit 2, the  
11 first page of which is Nearburg's Form C-102.

12          A.    That's correct.

13          Q.    Let's look at that and have you again describe,  
14 then, that the plat shows a proposed surface location on  
15 this display that is in the adjoining section to the south,  
16 which is Section 14.

17          A.    That's correct.

18          Q.    That surface location is unorthodox, is it not?

19          A.    That is correct.

20          Q.    Your intention is to use the pad or a pad  
21 extension that's available from an existing wellbore?

22          A.    That's correct.

23          Q.    Is that a well in Section 14 that Nearburg  
24 controls and operates?

25          A.    Yes, it is.

1 Q. The proposed bottomhole target is as shown on  
2 this display, is it not?

3 A. Yes, it is.

4 Q. And the plan is to utilize the Division Rule 111  
5 for directional drilling --

6 A. That's correct.

7 Q. -- and to have the Division approve a  
8 drilling/producing interval and area that has a side and an  
9 end boundary setback of not closer than 660 feet?

10 A. That's correct.

11 Q. All right. That would provide a drilling window,  
12 then, for Nearburg to hit the Morrow formation within that  
13 target area?

14 A. That's correct.

15 Q. All right. Let's look at the balance of the  
16 information shown on Exhibit 2. What are the other  
17 attachments?

18 A. There are APD, which was filed with the State of  
19 New Mexico. We have a map showing the location in  
20 proximity to both the City of Artesia and the airport. And  
21 then we have a location-verification map which, again, was  
22 done by John West, an engineering firm out of Artesia, I  
23 believe -- out of Hobbs.

24 Q. Let's illustrate for the Division the complexity  
25 of the surface-use issues that you're faced, and to



1 illustrate that, let me have you turn to Exhibit 3, and if  
2 you'll share with me the originals of your photographs, I  
3 will give the originals to the Examiner and let you work  
4 from the photocopy.

5 A. Okay.

6 MR. KELLAHIN: Let me make sure I do this right.  
7 It's like this. Here's the surface location, here's the  
8 bottomhole target. This is the spacing unit over here.

9 Q. (By Mr. Kellahin) Mr. Roush, this is a portion  
10 of an aerial photograph that is taken over this vicinity, a  
11 portion of which shows the east half of Section 11 and a  
12 portion of Section 14?

13 A. No, actually this primarily shows Section 11.

14 Q. All right.

15 A. The bottom dot, red dot, is the actual bottomhole  
16 location. The upper dot was an original location we were  
17 going to use for the surface.

18 Q. All right. So when the Examiner looks at this,  
19 he cannot see Section 14 and the current well site that  
20 you're going to use for directional drilling?

21 A. That's correct.

22 Q. But it will give him a visualization of the east  
23 half of Section 11?

24 A. Correct.

25 Q. Okay. Were you able to find a surface location

1 in the spacing unit that could be utilized to drill this  
2 well vertically?

3 A. Due to the proximity, if you'll look on the far  
4 western edge, you'll see literally the runway for the  
5 airport. It would be extremely difficult, if not  
6 impossible, to get a permit from the FAA to put a rig at a  
7 vertical location.

8 Q. The only possible surface location that you could  
9 find is the red dot in the north portion of the spacing  
10 unit?

11 A. That is correct.

12 Q. And you could achieve that at significant cost  
13 and expense?

14 A. Yes.

15 Q. Ultimately, Nearburg chose to attempt to  
16 directionally drill this well, utilizing the pad in Section  
17 14?

18 A. That's correct. When you consider the fact that  
19 we had an existing pad which we could use, we could use the  
20 existing reserve pits, it enabled us to not have to pay  
21 exorbitant damages to the north, and also did not have to  
22 build a new pad and pit.

23 Q. The requested proposal, then, would include the  
24 opportunity to drill this well directionally to a  
25 bottomhole target that could potentially be unorthodox?

1           A.    That is correct.

2           Q.    All right, sir.  Let's turn to another topic  
3 within your expertise, and that is the consolidation of the  
4 interest owners.  You mentioned in the east half of the  
5 section there were at least 30 different leases?

6           A.    That's correct.

7           Q.    How long have you been working on this project in  
8 association with other landmen for Nearburg?

9           A.    I personally for two years.  The project has been  
10 going on for approximately four years.

11          Q.    At this point, give us an approximation of the  
12 number of leases that you're able to voluntarily  
13 consolidate for this well.

14          A.    Nearburg right now has approximately 31 leases  
15 and some ownership of some minerals that we purchased.  We  
16 acquired this from 34 separate mineral owners.

17          Q.    At this point, what is the remaining outstanding  
18 working interest ownership for which you have not yet  
19 reached agreement?

20          A.    That would be the ownership that is owned by  
21 Yates, et al., which consists of some leasehold and some  
22 unleased minerals.

23          Q.    When we turn to Exhibit 4, you've got the plat of  
24 the east half of Section 11, and behind that you have a  
25 breakdown --

1 A. That's correct.

2 Q. -- of the identity of the interest owners and the  
3 gross working interest percentage?

4 A. Yes, based on the proration unit.

5 Q. Have you reached a voluntary agreement with Louis  
6 Dreyfus Natural Gas?

7 A. Yes, we have.

8 Q. And with the balance of the interest owners you  
9 have not yet reached an agreement?

10 A. Not at this time, no.

11 Q. Are all those interest owners collectively  
12 represented or at least being negotiated by the land  
13 department of Yates Petroleum Corporation?

14 A. Yes.

15 Q. Let's turn to your proposal to the Yates entities  
16 and have you identify and describe what Nearburg has  
17 proposed, starting with your September 1st letter, Exhibit  
18 Number 5.

19 A. On September 1st we proposed the well, setting  
20 forth a surface location of 2110 from the west, 1070 from  
21 the north of Section 14, bottomhole location of 2100 feet  
22 from the east, 1300 feet from the south line of Section 11.  
23 We provided with that an AFE and a joint operating  
24 agreement.

25 Q. This well, then, was proposed to the interest

1 owners as a directional wellbore?

2 A. Yes, it was.

3 Q. Attached to that letter is a list of the  
4 distribution of this proposal?

5 A. That's correct.

6 Q. So at this point in September you were under the  
7 understanding and belief that Yates and the other Yates  
8 entities controlled the remaining uncommitted interests for  
9 this project?

10 A. Yes, sir.

11 Q. And did your proposal include an AFE?

12 A. Yes, it did.

13 Q. And is that AFE attached to this exhibit?

14 A. Yes, it is.

15 Q. Let's turn now to the next exhibit. It's Exhibit  
16 Number 6. Would you identify and describe that?

17 A. It's a letter dated September 21st, reproposing  
18 the well at the current bottomhole location that we're  
19 looking at today of 1980 from the east and 660 from the  
20 south. We provide with that again an AFE and a revised  
21 page 4 to the JOA setting forth correct bottomhole  
22 location.

23 Q. Okay. The original proposal was an attempt to  
24 bottom this well farther north in the spacing unit, and  
25 then by September 21st your company has re-evaluated the

1 geology and is proposing to be closer to the south boundary  
2 than originally intended?

3 A. That's correct.

4 Q. The September 21st proposal, then, puts you in an  
5 unorthodox location, potentially, in the Morrow?

6 A. Correct.

7 Q. All right. Again, you submitted an AFE, and it  
8 was also to Yates and all the Yates entities?

9 A. That's correct.

10 Q. All right. At this point have you received any  
11 objection from Yates with regards to the well proposal?

12 A. To the location, no.

13 Q. All right.

14 A. In fact, we have received a waiver from Yates.

15 Q. So there is no objection to the fact that Yates  
16 controls offsetting interests and that this well could be  
17 unorthodox?

18 A. That is correct.

19 Q. As to the commitment of their interest in the  
20 spacing unit, have you received any objection from them?

21 A. Objection, no.

22 Q. All right. This week did you receive a proposal  
23 indicating that Yates may be interested collectively in  
24 farming out its interest to Nearburg?

25 A. Yes, we have.

1 Q. And you're engaged in pursuing to see if you can  
2 reach a voluntary agreement on that basis?

3 A. That is correct.

4 Q. In the event a farmout is unsuccessful, have you  
5 proposed to Yates their participation pursuant to an  
6 operating agreement?

7 A. Yes, we have.

8 Q. Would you identify and describe for us Exhibit 7?

9 A. The operating agreement that was mailed out with  
10 the original proposal of September 1st and subsequently  
11 amended as to page 4 in our September 21st letter. It sets  
12 forth an overhead rate of \$6000 and \$600.

13 Q. In the event you require to use a compulsory  
14 pooling order, do you have a recommendation to the Examiner  
15 as to an overhead rate to include in that order?

16 A. Yes, \$6000 and \$600.

17 Q. And that would be consistent with the rates  
18 proposed under the operating agreement?

19 A. That is correct.

20 Q. And is that a standard rate used by you and  
21 others, other companies, for drilling wells in this area to  
22 this depth?

23 A. Yes, it is.

24 Q. Have you had any objection from Yates concerning  
25 the AFE?

1 A. No, we have not.

2 Q. Have you had any objection from Yates concerning  
3 the fact that this would be a directional wellbore?

4 A. No, we have not.

5 MR. KELLAHIN: That concludes my examination of  
6 Mr. Roush.

7 We move the introduction of his Exhibits 1  
8 through 7.

9 EXAMINER CATANACH: Exhibits 1 through 7 will be  
10 admitted as evidence.

11 Mr. Carr?

12 MR. CARR: I have no questions.

13 EXAMINATION

14 BY EXAMINER CATANACH:

15 Q. Mr. Roush, I think your testimony was that  
16 initially you tried to locate a well at a surface location  
17 within the east half of Section 11 and were unable to do  
18 so?

19 A. That is correct.

20 Q. And the restriction that you stated, was that --  
21 The restriction with regards to the FAA, was that for the  
22 entire east half?

23 A. No, it was not for the entire east half. The  
24 main reason we moved the location from where it was on this  
25 plat you're looking at were threefold, actually.



1           One, they wanted some pretty exorbitant damages  
2   and expenses for locating the well at this northern  
3   location.

4           Two, we had an existing pad and reserve pits  
5   available for the drilling of the well.

6           And three, the FAA had previously approved the  
7   location of the well to the south in 14, which meant we  
8   would probably -- probably will and can get again an  
9   approval to put a rig out there.

10          Q.    Okay, so when you say the original location,  
11   you're talking about in the northeast quarter of Section  
12   11?

13          A.    If we're talking --

14          Q.    Have you tried to stake the well at that point?

15          A.    As far as a surface location?

16          Q.    Right.

17          A.    Right, we originally tried to go and attempt to  
18   negotiate with the landowners there to put a rig on that  
19   location.

20          Q.    Okay. But if that well were to have been drilled  
21   at that point, would it still have been directionally  
22   drilled --

23          A.    Yes.

24          Q.    -- south --

25          A.    Yes.

1 Q. -- to the current bottomhole location?

2 A. That's correct. We were going to go directional  
3 either way.

4 Q. Okay, so you want the well to end up at a  
5 bottomhole location in the southeast quarter?

6 A. That is correct.

7 Q. Based on geology.

8 A. That's correct.

9 Q. And with regards to locating a well at a surface  
10 location within the southeast quarter, that's due to the  
11 FAA restrictions?

12 A. That's correct.

13 Q. And did you explore that possibility of getting  
14 that permitted?

15 A. We did. This project has been ongoing for --  
16 well, since I've been to work for Nearburg. We've gone  
17 through two field people in this project, and the original  
18 person that went out on this was a gentleman by the name of  
19 Van Rogers. We spoke extensively with the FAA and the  
20 airport.

21 And, you know, if you can see right here, here's  
22 your runway, and literally we're probably 40 feet  
23 offsetting where the runway would be on an approach and  
24 takeoff position.

25 Q. But you're cleared at this point to drill from

1 that surface location in Section 14?

2 A. We have not gotten our approval, we have not  
3 gotten the formal permit, but we have literally moved 50  
4 feet from where we got the permit the last time from the  
5 FAA.

6 Q. So you still have to get that permit from the  
7 FAA?

8 A. Yes, and I'm quite confident we'll get it.

9 Q. Okay. The affected -- as per the unorthodox  
10 location and moving towards these -- north half of Section  
11 14, who operates that acreage?

12 A. Nearburg.

13 Q. And is there a well in that acreage?

14 A. Yes, there is. It's the Eagle Creek 14 Number 1  
15 well.

16 Q. And that's a producing Morrow well?

17 A. Just recently, yes.

18 Q. Is that -- Who owns an interest in that spacing  
19 unit? Is there --

20 A. That's -- Right now, Nearburg, and we have a  
21 joint-venture partner in Louis Dreyfus.

22 Q. Those are the only two?

23 A. Currently, yes. Yates also had an interest in  
24 that and elected to farm out in that tract.

25 Q. And Dreyfus is an interest owner in Section 11,

1 as well?

2 A. Yes, we have a joint venture covering quite a bit  
3 of acreage in this area.

4 Q. Mr. Roush, have you, in fact, got approval to  
5 directionally drill the well, or is that --

6 A. No, we're attempting to get the approval now.

7 Q. From -- Is that going to be from the District  
8 Office?

9 A. District Office.

10 MR. KELLAHIN: Mr. Examiner, I have filed an  
11 application with Tim Gum in the District, pursuant to the  
12 Rule 111. The one thing I need from the Division in this  
13 case is the movement of that drilling window to an  
14 unorthodox position, which he is unable to approve.

15 Q. (By Examiner Catanach) Okay. Is there an AFE  
16 for this well that you submitted, Mr. Roush?

17 A. Yes, it's connected to one of the -- It should be  
18 attached in a reduced form to the initial September 1st  
19 letter, Exhibit -- What is that? Exhibit 3?

20 MR. KELLAHIN: It's attached to Exhibit 5, Mr.  
21 Examiner.

22 THE WITNESS: Exhibit 5, I'm sorry, at the very  
23 back. It's also attached to the subsequent proposal,  
24 September 21st.

25 Q. (By Examiner Catanach) It looks like that didn't

1 change very much.

2 A. Well, actually, if you look at the distance  
3 between the initial well proposal surface location and the  
4 proposal that we're using right now, the footage is really  
5 probably only 100- or 200-foot difference, as far as  
6 distance from the bottomhole location.

7 Q. I thought the first proposal was 1300 and some  
8 feet from the south line.

9 A. That would be the --

10 Q. 1300 feet from the south line would be the  
11 bottomhole location.

12 A. Right.

13 Q. And you've now moved it to 660 from the south  
14 line.

15 A. That is correct. But if you'll look on your  
16 plat, the aerial photo, if you'll look at what we've  
17 presently got from this surface location of -- I assume to  
18 be 2110, 1070, to the bottomhole location we have now  
19 versus the surface location we have now, there's very  
20 little difference in distance.

21 Q. There's been no objection to your location from  
22 any of the offset interest owners?

23 A. No, there has not.

24 EXAMINER CATANACH: Okay. I have nothing further  
25 of this witness, Mr. Kellahin.

1 MR. KELLAHIN: Our next witness is Mr. Elger, Mr.  
2 Examiner.

3 JERRY B. ELGER,  
4 the witness herein, after having been first duly sworn upon  
5 his oath, was examined and testified as follows:

6 DIRECT EXAMINATION

7 BY MR. KELLAHIN:

8 Q. Mr. Elger, for the record would you please state  
9 your name and occupation?

10 A. My name is Jerry Elger, I'm an exploration  
11 geologist for Nearburg Producing Company.

12 Q. And you reside in Midland, Texas?

13 A. That's correct.

14 Q. Is the project we're about to look at for the  
15 drilling of the Eagle Creek 11-1 well one of your geologic  
16 projects?

17 A. Yes, it is.

18 Q. And your responsibility has been to map the  
19 Morrow channel area and try to find a location for your  
20 well in the east half of 11?

21 A. Yes.

22 Q. As part of your study, do you now have an opinion  
23 as to the appropriate percentage of risk factor penalty to  
24 be applied in the pooling portion of this case?

25 A. Yes, I do.

1 Q. And what opinion do you have, sir?

2 A. That would be cost plus 200 percent.

3 Q. Do you have reasons that will support that  
4 opinion?

5 A. Yes, I do.

6 Q. Let's look at Exhibit Number 8, and before we  
7 talk about your reasons, show us the kinds of information  
8 on the display, and particularly show us the target Morrow  
9 interval that you're attempting to access.

10 A. The target Morrow interval is what I've called  
11 the Morrow upper "C" zone sand. It is a sand channel that  
12 runs almost north-south. It's skewed slightly northwest-  
13 southeast. It's been identified, the isopachs are from  
14 this particular sand. The isopach interval is 25 feet.

15 Wells shaded in red represent those wells which  
16 are productive from this particular sand, and the  
17 production cums to date from each one of these individual  
18 wells has also been noted on this isopach.

19 Wells that are shaded in yellow represent wells  
20 which encountered sand in this same interval but were not  
21 productive.

22 And wells which are shaded gray are basically  
23 outside the channel system and encountered a shale  
24 environment.

25 The channel can be, as indicated by this

1 particular map, locally as thick as nearly 90 feet and as  
2 thin as four or five feet towards the margins of the  
3 channel.

4 Q. Let's look specifically at your reasons to  
5 support the 200-percent penalty, and let me focus your  
6 attention on the presence or absence of well control  
7 immediately adjacent to your proposed well.

8 A. There is a number of wells which help to identify  
9 the channel margin on the west, those wells being all  
10 located or included on cross-section A-A', include a well  
11 in the southeast quarter of 10, a well in the southwest  
12 quarter of 11, and a recent well that we drilled in the  
13 northwest quarter of Section 14.

14 On the eastern margin of the channel, towards  
15 which the proposed location is being located, you see  
16 there's basically a lack of any deep Morrow well control,  
17 and hence we're moving in a direction away from well  
18 control, which increases the risk.

19 Q. Is it a component of the risk that it is not  
20 certain that the channel will have this width or dimension  
21 to it as it moves east and west?

22 A. Yes, that's correct.

23 Q. So there's a possibility that your location could  
24 be on the eastern edge of this channel, as opposed to where  
25 you hope it is, more centrally located in that channel?



1 A. That's correct.

2 Q. Is there an element of risk associated with this  
3 well, even if you are able to locate it in the channel?

4 A. Yes, there is.

5 Q. Describe for us how we see that reasoning.

6 A. If we look to the south where we have well  
7 control and have production identified, you'll notice, for  
8 instance, a well in -- two wells, actually, in the south  
9 half of Section 24. One encountered 14 feet of sand and  
10 produced 1.7 BCF of gas from this particular channel.

11 Q. You're looking in Section 24?

12 A. That's correct.

13 Q. The well with 14 feet of sand got 1.7 BCF?

14 A. Yes.

15 Q. All right, to what do we compare that?

16 A. Well, compare that with another well -- either  
17 another well that's been incorporated on the cross-section  
18 in the southwest quarter of Section 13, which encountered  
19 24 feet of sand and yet only made a quarter of a BCF of  
20 gas, or compare it with a well in the south half of Section  
21 25 -- Well, there's three wells in the south half of  
22 Section 25. One encountered 24 feet of sand but was not  
23 productive at all, another one encountered 20 feet of sand  
24 and only made less than one-fifth of a BCF of gas, and it's  
25 immediately adjacent to a well that encountered 88 feet of

1 sand and made 7.3 BCF of gas.

2 So the numbers -- the thickness values of wells  
3 in the vicinity of our proposed location don't exceed 28  
4 feet. Hence, we're not -- The isopach values at the  
5 proposed location we would hope would be in excess of 25  
6 feet, but if our map is something drawn with our mapping,  
7 if our map -- the accuracy of our mapping is weak in that  
8 direction because of the well-control factor, we could  
9 encounter 20 or 24 feet of sand and be noncommercial.

10 Q. Okay. Is there a risk associated with the fact  
11 that you are in proximity of wells to the west? Is that  
12 going to diminish your risk?

13 A. No.

14 Q. Can you give us an illustration of examples where  
15 you can offset production and not be successful?

16 A. Yes. And again, I would point to that area in  
17 the south half of Section 25 where two wells which happened  
18 to be drilled simultaneous with each other are within --  
19 less than a thousand feet apart. Those two wells are the  
20 two that I mentioned earlier, one of which encountered 20  
21 feet of sand, one of which encountered 88 feet of sand.  
22 One was a very prolific well, and the other was not  
23 commercial.

24 Q. So the fact that you've forecasted sand thickness  
25 of, hopefully, 28 feet, does not necessarily reduce your

1 risk?

2 A. No.

3 Q. If you get 28 feet or less, there are a number of  
4 wells on here that have not been commercial?

5 A. Yes.

6 Q. And if you're associated to production, there are  
7 examples of noncommercial wells within 40-acre offsets of  
8 successful wells?

9 A. Yes.

10 Q. Let's look more specifically at the well in the  
11 west half of 11. It says 22 feet. How do we know that  
12 well? What's it's name?

13 A. Let's open up Exhibit Number 9, which is the  
14 Morrow stratigraphic cross-section. That well is included  
15 on this exhibit.

16 Q. Let's look at that well.

17 A. That well, and the immediate northwest offset  
18 which didn't encounter any sand, were both drilled by Yates  
19 Petroleum Corporation as their Artesia Airport "CF" Number  
20 1 and Number 2.

21 Q. What's the vintage of that well?

22 A. That well was drilled in 1971.

23 Q. Is it still producing?

24 A. Yes, it is.

25 Q. At what approximate rate, do you know?

1           A.    The cumulative production and daily rate are  
2 included just above the well log. The well's made 845  
3 million feet and is productive at the rate of 84,000 cubic  
4 feet per day.

5           Q.    And it's taken it more than 20 years to do that?

6           A.    Yes.

7           Q.    Okay. When we look at the northwest of 14, the  
8 well on your isopach shows 28 feet. What is the name  
9 associated with that well?

10          A.    That's the Nearburg Eagle Creek 14 Number 1 well,  
11 which was drilled in August of this year.

12          Q.    The forecast of that well is that you might be in  
13 the Morrow channel, and it might produce from the interval  
14 produced by the Yates well?

15          A.    Yes.

16          Q.    And has it done that?

17          A.    Yes.

18          Q.    What information do you have from your new well  
19 that gives you concern about the geologic interpretation  
20 that you display here?

21          A.    I would reference the drill stem tests on both  
22 the Yates well and the Nearburg well. If you look at the  
23 vintage of the drill stem test on the Yates well drilled in  
24 1971, the bottomhole pressure as indicated by that drill  
25 stem test was 3180 pounds, approximately.

1           The drill stem test in August of this year,  
2 across the same sand, by Nearburg Producing Company,  
3 indicated a bottomhole pressure of approximately 3000  
4 pounds. So we've been -- The assumption is that we're  
5 connected with the Yates well, but we've only seen  
6 approximately 180 pounds of drawdown in the reservoir at  
7 our location that's occurred over the span of -- what?  
8 Seventeen or 18 years.

9           Q. When you look at the cross-section, the available  
10 log data would cause you in a conventional analysis to make  
11 a correlation connection between the producing interval in  
12 the Yates well and in the Nearburg well?

13          A. Right.

14          Q. Yet the actual production -- I mean the pressure  
15 test information, indicates that they're not so clearly  
16 connected as you might think geologically?

17          A. That's correct.

18          Q. There's something happening in the reservoir that  
19 you can't explain?

20          A. That's correct.

21          Q. How does that pose an element of risk to you, in  
22 terms of the location you're now seeking approval for?

23          A. Well, the same factors that apply in the  
24 relationship internally within the sand deposit that  
25 occurred between these two wells could occur between either

1 of these two wells in the new location. Hence, there's an  
2 element of risk there.

3 Q. Let's look at the location within the spacing  
4 unit. The proposal is to have an unorthodox drilling  
5 window for the well and to honor a 660 boundary setback  
6 from the south, west and east dimensions of the spacing  
7 unit?

8 A. Yes.

9 Q. Why are you seeking the unorthodox location?

10 A. The geological information, the interpretation is  
11 that that bottomhole location represents the maximum  
12 opportunity for us to encounter a sand, commercial sand,  
13 with commercial reservoir properties, in that east-half  
14 spacing unit of 11.

15 Q. The unorthodox location is preferable than the  
16 closest standard location?

17 A. Yes.

18 Q. Does the fact that you're moving to an unorthodox  
19 location result in reducing the risk to less than the  
20 maximum 200 percent under a pooling order?

21 A. Yes.

22 Q. I didn't make myself clear to you, Mr. Elger.  
23 You were looking at something else while I was asking you  
24 something.

25 A. Could you rephrase that question?

1 Q. Yes, sir, let me see if I can repeat it.

2 You've told us that a standard location in the  
3 spacing unit is not preferable --

4 A. Yes.

5 Q. -- that you would like to target what you hope is  
6 a thicker portion of the sand?

7 A. Right.

8 Q. My question for you is, by moving to the  
9 unorthodox location, are you reducing your risk to such an  
10 extent that the Examiner should award you less than 200  
11 percent as the risk factor for the pooling order?

12 A. No.

13 Q. All right, and why not?

14 A. Well, because of the risk ingredients that go  
15 into this particular location that I've already described.

16 MR. KELLAHIN: Okay. Mr. Examiner, that  
17 concludes my examination of Mr. Elger. We move the  
18 introduction of his Exhibits 8 and 9.

19 EXAMINER CATANACH: Exhibits 8 and 9 will be  
20 admitted as evidence.

21 EXAMINATION

22 BY EXAMINER CATANACH:

23 Q. Mr. Elger, the wells down in Section 25 that  
24 encountered 25 feet of sand, 24 feet of sand, 20 feet of  
25 sand, why are those noncommercial? Do you know?

1           A.    Let's look at the cross-section, because one of  
2 those wells, not commercial wells, that encountered 24 feet  
3 of sand is displayed on this cross-section, and that is the  
4 Yates Jackson AT Number 9, which is the second from the  
5 right.

6                   If you look at the quality -- This well was  
7 obviously within the confines of the channel and  
8 encountered 24 feet of sand, but if you look, the sand has  
9 a dirty aspect to it relative to the gamma-ray readings,  
10 and very poor porosity development associated with, really,  
11 any parts of this particular sand.

12                  They shot, perforated the upper part of the sand,  
13 completed the well to flow 3 million a day, but the well  
14 has cum'd just slightly over a quarter of a BCF. I would  
15 submit that the wells in 25 that have 20 to 25 feet of sand  
16 probably look something like this in log character.  
17 They're dirty, they're shaly, they're not in a clean part  
18 of the channel.

19           Q.    Okay. By moving north in Section 11, towards a  
20 more standard location, what would the effect be, do you  
21 think, of the sand development?

22           A.    Based on this interpretation, I think you could  
23 be moving towards an environment which is very similar to  
24 outside of the area of the main streamflow in this channel  
25 system, and thereby you could be looking at less winnowing



1 of the quartz, a higher clay content remaining, all of  
2 those ingredients which go into a less productive or less  
3 permeable reservoir.

4 Q. Would you be, in your opinion, moving toward a  
5 thinner section?

6 A. Yes.

7 Q. Moving north.

8 A. Well, it would be thinner, but I think it would  
9 be more located on the edge of the channel and therefore  
10 more apt or higher probability of encountering nonreservoir  
11 sand.

12 Q. The 25-foot contour line that you've got mapped  
13 in the east half of Section 11, what data did you use to  
14 determine the configuration in that?

15 A. That is a mix of interpretation from seismic.  
16 It's a mix of interpretation of the stratigraphic dipmeter,  
17 which we ran in our Eagle Creek Number 14, and it's a --  
18 just subsurface interpretation, a combination of those  
19 three ingredients.

20 Q. So you did use 3-D seismic out here?

21 A. Yes, and the very southern portion of the 3-D  
22 seismic has been shown in my Exhibit Number 8 in red,  
23 outlined in red.

24 Q. Is that your well -- In Section 14, that's the  
25 new well that Nearburg has drilled, right?

1 A. Correct.

2 Q. Did you also use seismic to determine that  
3 location?

4 A. We did to some degree. As you can see, the 3-D  
5 outline is very close to that well, and because of that  
6 we're losing fold, or the ability to determine the channel  
7 event in that location. So that was -- that particular  
8 location was positioned more on subsurface well control  
9 than, really, anything.

10 EXAMINER CATANACH: Okay, I have no further  
11 questions of this witness.

12 MR. KELLAHIN: Our last witness is Mr. Clyde  
13 Findlay.

14 CLYDE FINDLAY,  
15 the witness herein, after having been first duly sworn upon  
16 his oath, was examined and testified as follows:

17 DIRECT EXAMINATION

18 BY MR. KELLAHIN:

19 Q. Mr. Findlay, for the record, sir, would you  
20 please state your name and occupation?

21 A. Clyde Findlay, F-i-n-d-l-a-y, senior petroleum  
22 engineer, Nearburg Producing Company, L.L.C.

23 Q. Mr. Findlay, have you reviewed the technical data  
24 concerning the directional drilling portion of this  
25 Application?

1 A. Yes, I have.

2 Q. And you have analyzed the consulting experts'  
3 proposed drilling program for directionally drilling this  
4 wellbore?

5 A. I have.

6 MR. KELLAHIN: Mr. Examiner, we tender Mr.  
7 Findlay as an expert petroleum engineer.

8 EXAMINER CATANACH: Mr. Findlay is so qualified.

9 Q. (By Mr. Kellahin) Mr. Findlay, let's take  
10 Exhibit 10 and have you turn with me to the illustration so  
11 we can describe the project to Mr. Catanach. If you'll  
12 turn to page 4 of Exhibit 10, you're going to see a  
13 profile.

14 A. Correct.

15 Q. Identify and describe for us what the project  
16 plan is for drilling this well in Section 14 at a surface  
17 location and then to intersect the bottomhole target at the  
18 top of the Morrow under this plan. Show us how we get  
19 there.

20 A. Yes. Again, the surface location is in Section  
21 14, as described, 1070 from north line, 2110 from west  
22 line. It utilizes an existing pad of the Nearburg Eagle  
23 Creek 14-1.

24 We will drill a straight vertical hole to a depth  
25 of approximately 4100 feet. At that point we will begin

1 our deviational part, our directional part, of our well,  
2 where we will build angle at approximately 2 1/2 degrees  
3 per hundred feet, and at a depth of approximately 5400  
4 feet, we will have built an angle of 34.68 degrees. And  
5 these details are listed in the tabular portion of this  
6 plan.

7 And then at the 5400-foot depth, 5487, then we  
8 hold angle until we reach TD. This plan is devised to  
9 facilitate penetrating the Morrow -- as you can see in the  
10 top of the graphical illustration -- to penetrate the  
11 Morrow at the southwest corner of our 330-foot-square  
12 target, and the southwest corner would be 1980 from the  
13 east line and 660 from the south line in Section 11. That  
14 depth would be a TVD of approximately 7850 feet.

15 That is also listed in the tabular portion of the  
16 plan.

17 Q. If the Division Examiner approves a subsurface  
18 producing area and producing interval that requires you to  
19 be 660 offset from the side and end boundaries of the  
20 spacing unit, is that an adequate drilling-producing target  
21 from which to access the Morrow reservoir?

22 A. That's correct.

23 Q. That would give you adequate flexibility to make  
24 adjustments in the field during drilling and still honor  
25 those side boundary setbacks?

1 A. Correct.

2 Q. And it's forecasted, based upon this profile,  
3 that you're anticipating the top of the Morrow at a certain  
4 subsurface depth, and the plan is fixed according to that  
5 assumption?

6 A. Correct.

7 Q. Let's look at the AFE for a moment. It's the  
8 same AFE that was attached to the correspondence to the  
9 interest owners that Mr. Roush testified to.

10 I know you don't prepare AFEs, Mr. Findlay, but  
11 when we look through the AFE there is a portion of this  
12 cost associated with the directional drilling program. Can  
13 you identify for us the line item and the number associated  
14 with that?

15 A. Yes, if you will look on the first page of the  
16 AFE under "Directional Drilling - Tools and Service", you  
17 will see a cost of \$80,000 for directional drilling.

18 Q. Now, the contractor has made the assumption that  
19 this cost would remain the same, based upon whether the  
20 well was bottomed subsurface farther north than the final  
21 plan suggests, right?

22 A. I believe that's correct.

23 Q. All right. If there is an additional cost in  
24 terms of directional drilling to move to various locations,  
25 we will see it reflected in the final cost component under

1 this line item for directional drilling?

2 A. I believe that's correct. I also notice that the  
3 bit cost is rather high, compared to a vertical well, and  
4 that is probably also a component of this horizontal -- or  
5 not horizontal -- directional plan.

6 Q. For estimate purposes, though, it's your  
7 understanding this is Nearburg's best estimate of what it  
8 would cost to do this project using the current proposed  
9 bottomhole location?

10 A. Correct.

11 MR. KELLAHIN: All right. That concludes my  
12 examination of Mr. Findlay, Mr. Examiner. We move the  
13 introduction of his Exhibit Number 10.

14 EXAMINER CATANACH: Exhibit Number 10 will be  
15 admitted as evidence.

16 EXAMINATION

17 BY EXAMINER CATANACH:

18 Q. Mr. Findlay, on your diagram here, you hope to  
19 encounter the top of the Morrow at that southwest corner of  
20 the target window?

21 A. Yes, sir.

22 Q. Do you have an estimate of where you will  
23 actually encounter the top of the producing section?

24 A. That would probably be better answered by Jerry's  
25 cross-section. To make sure that we did not violate any

1 rules at all, I went to Jerry the other day and suggested  
2 that we penetrate the Morrow wherever he calls the top of  
3 that interval, and that may not necessarily -- 7850 may be  
4 higher than the top of the producing interval, but it  
5 guarantees that we are no closer to the section lines than  
6 660 and 1980, if we were to encounter the producing sand at  
7 a depth of 7850.

8 Q. So as per your drilling plans, there's very  
9 little chance that you will encounter that producing Morrow  
10 interval any closer than 660 from the south?

11 A. Correct.

12 Q. Okay. And you are requesting that you be given a  
13 330-foot-square target window for that?

14 A. Yes, sir.

15 EXAMINER CATANACH: Okay, I have nothing further,  
16 Mr. Kellahin.

17 MR. KELLAHIN: Mr. Examiner, I'm not sure the  
18 dimensions on that target. I think they're bigger than  
19 330. If you're using the bottom of a half section that's  
20 2640, and if you're setting back 660 from the sides it's  
21 going to give you an east-west dimension of -- what?  
22 Twelve hundred and some feet. So the box will be bigger  
23 than what you've described. Am I misunderstanding this?

24 EXAMINER CATANACH: The southwest corner of that  
25 drilling window box is 660 and 1980, right?

1 THE WITNESS: Correct.

2 MR. KELLAHIN: Well, that's his hopeful target.

3 EXAMINER CATANACH: Right.

4 MR. KELLAHIN: But in terms of approvals, we  
5 would like the flexibility to be no closer than 660 to the  
6 west side of that spacing unit, or 660 to the south side of  
7 the spacing unit, but it leaves it open for them to steer  
8 this well or move it farther north and east, and could  
9 potentially be north and east of the 330 box.

10 EXAMINER CATANACH: Well, I don't understand. If  
11 they encounter the top of the Morrow at the southwest  
12 corner of that drilling window, that still gives them the  
13 flexibility to drill north and east further in that box.

14 MR. KELLAHIN: I understand, and that's the  
15 target. However, under Rule 111 it is no longer necessary  
16 to restrict them to a 330-square target box. They do have  
17 the option, should they choose to do that in the field, of  
18 going outside that box, so long as they cross the box on  
19 the north or east boundary. That would still be approvable  
20 under your rules.

21 EXAMINER CATANACH: So you're suggesting that we  
22 eliminate -- we don't put a target window in or --

23 MR. KELLAHIN: That's right, yeah, we just give  
24 them the standard Rule-111 box to hit, and the two  
25 controlling dimensions are the western boundary and the



1 southern boundary.

2 EXAMINER CATANACH: Okay.

3 MR. KELLAHIN: And so if the contractor misses  
4 the box, we don't have to come back and get approval.

5 EXAMINER CATANACH: Okay. Anything further?

6 MR. KELLAHIN: Yes, sir, I've got a certificate  
7 of notice. It's Exhibit Number 11. Attached to it is the  
8 notice letter. And behind that, then, Exhibit A, are the  
9 parties to be pooled. Exhibit B shows the names and  
10 addresses of the affected tracts, which are shown in orange  
11 on Mr. Roush's Exhibit 1. They will be the interest owners  
12 in Section 14 and 13, towards which the well encroaches.

13 And with the introduction of that exhibit, we  
14 have completed our presentation.

15 EXAMINER CATANACH: Okay, Exhibit 11 will be  
16 admitted as evidence.

17 And there being nothing further, Case 12,073 will  
18 be taken under advisement.

19 (Thereupon, these proceedings were concluded at  
20 9:35 a.m.)

21 \* \* \*

22 I do hereby certify that the foregoing is  
23 a complete record of the proceedings in  
24 the Examiner hearing of Case No. 12073,  
25 heard by me on 11/5 1988.

David R. Catanach, Examiner  
Oil Conservation Division

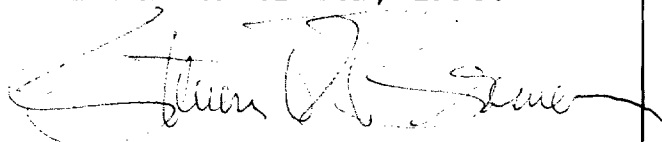
## CERTIFICATE OF REPORTER

STATE OF NEW MEXICO    )  
                              )   ss.  
COUNTY OF SANTA FE    )

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL November 8th, 1998.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 2002